

B3 Sub 3  
75. (Amended) A method for use in creating a digital model of a tooth in a patient's dentition, the method comprising:

- (a) scanning the patient's dentition, or a physical model thereof, to produce a three-dimensional (3D) data set representing the patient's dentition;
- (b) applying a computer-implemented test to identify data elements that represent an interproximal margin between two teeth in the dentition;
- (c) applying another computer-implemented test to select data elements that lie on one side of the interproximal margin for inclusion in the digital model;

wherein applying the computer-implemented tests is carried out by a computer without human intervention.

B3 Sub C5  
98. (Amended) A method for use in creating a digital model of a tooth in a patient's dentition, the method comprising:

- (a) scanning the patient's dentition, or a physical model thereof, to produce a 3D dataset representing at least a portion of the patient's dentition, including at least a portion of a tooth and gum tissue surrounding the tooth;
- (b) applying a test to identify data elements lying on a gingival boundary that occurs where the tooth and the gum tissue meet; and
- (c) applying a test to the data elements lying on the boundary to identify other data elements representing portions of the tooth;

wherein applying the computer-implemented tests is carried out by a computer without human intervention.

B4 Sub 1  
121. (Amended) A computer program, tangibly stored on a computer-readable medium, for use in creating a digital model of an individual component of a patient's dentition, the program including executable instructions that, when executed by a computer, cause the computer to:

B4 (a) receive a data set that forms a three-dimensional (3D) representation of the patient's dentition, wherein some of the data is obtained by imaging a physical model of the patient's teeth or by imaging the patient's teeth directly;

(b) apply a test to the data set to identify data elements that represent portions of an individual component of the patient's dentition; and

(c) create a digital model of the individual component based upon the identified data elements;

wherein the computer applies the test without human intervention.

B5 147. (Amended) A computer program, tangibly stored on a computer-readable medium, for use in creating a digital model of a tooth in a patient's dentition, the program including executable instructions that, when executed by a computer, cause the computer to:

(a) receive a three-dimensional (3D) data set representing the patient's dentition, wherein some of the data is obtained by imaging a physical model of the patient's teeth or by imaging the patient's teeth directly;

(b) apply a test to identify data elements that represent an interproximal margin between two teeth in the dentition;

(c) apply another test to select data elements that lie on one side of the interproximal margin for inclusion in the digital model;

wherein the computer applies the test without human intervention.

B6 170. (Amended) A computer program, tangibly stored on a computer-readable medium, for use in creating a digital model of a tooth in a patient's dentition, the program including executable instructions that, when executed by a computer, cause the computer to:

(a) receive a 3D data set representing at least a portion of the patient's dentition, including at least a portion of a tooth and gum tissue surrounding the tooth, wherein some of the data is obtained by imaging a physical model of the patient's teeth or by imaging the patient's teeth directly;

(b) apply a test to identify data elements lying on a gingival boundary that occurs where the tooth and the gum tissue meet; and